

Amendments

In accordance with 37 CFR §1.121, please amend the above-identified application as set forth below.

Amendments to Claims:

Please amend the claims as set forth below.

1. (Withdrawn) A method for separating disc-shaped bodies from a source body having a face and a longitudinal direction, including the steps of:
 - guiding the source body in a tunnel,
 - mounting a plurality of lamps in a planar fashion along the longitudinal direction of the source body in the tunnel,
 - illuminating the source body and the environment of the face of the source body with said plurality of lamps,
 - optically detecting a respective face of the source body with a detection device by means of the contrast between the environment of the face and the face,
 - determining the slice thickness required for a predetermined slice weight from the specific gravity of the source body and face, and
 - controlling separation of the disc-shaped body from the source body utilizing the value determined in the preceding step.

2. (Withdrawn) A method according to claim 1, the lamps are pulse-controlled and the respective face is trigger photographed by the detection device.
3. (Withdrawn) A method according to claim 1, wherein the lamps are individually automatically adjusted, including the steps of:
 - storing setting parameters for the lamps for certain ambient conditions,
 - reading out the setting parameters as a function of the respective ambient condition,

adjusting the lamps as a function of the read-out setting parameters and the respective ambient conditions.

4. (Withdrawn) A method according to claim 3, wherein the adjustment of the lamps is controlled by the detection device to eliminate reflection and increase contrast.

5. (Withdrawn) A method according to claim 1, wherein the face is additionally illuminated and the detection device evaluates surface structures of the face and the slice thickness required for a predetermined slice weight is also determined as a function of the surface structure of the face.

6. (Currently Amended) An apparatus for separating discrete bodies from a source body having a face and a longitudinal direction, the apparatus comprising:

a separating device;

an advance device for advancing the source body towards the separating device;

an optical detection device for determining the face area of the source body;

a tunnel in which the source body is guided, the tunnel having an end adjacent the separating device, the tunnel having a length substantially aligned with the longitudinal direction;

a plurality of lamps for illuminating the surrounding environment of the face;

the lamps being mounted in the tunnel for illuminating in a planar fashion along the longitudinal direction of the source body such that the face and the surrounding environment of the face have an optical contrast,

wherein the optical detection device determines the area of the face by means of said optical contrast between the surrounding environment and the face, and the source body is advanced as a function of the detected face area as determined by the optical detection device; and

wherein the tunnel comprises a front edge in which the lamps deliver diffuse radiation completely around the surrounding environment of the face with an intensity which is reduced towards the face.

7. (Withdrawn) An apparatus according to claim 6, wherein the lamps are individually adjustable.

8. (Withdrawn) An apparatus according to claim 7, wherein the direction of radiation of the lamps can be oriented individually.

9. (Withdrawn) An apparatus according to claim 7, wherein the lamps are movable by motorised means and a control system is provided for adjustment of the lamps.

10. (Withdrawn) An apparatus according to claim 9, wherein the control system has a memory for the storage of settings for the lamps for respective ambient conditions.

11. (Withdrawn) An apparatus according to claim 10, wherein the control system evaluates reflection and contrast of the detected image and the control system adjusts the lamps to minimise reflection and increase contrast.

12. (Withdrawn) An apparatus according to claim 6, wherein the lamps are controlled in pulsed fashion and the detection device is controlled in correspondingly triggered fashion.

13. (Withdrawn) An apparatus according to claim 6, wherein the lamps are potted and form a smooth surface.

14. (Original) An apparatus according to claim 6, wherein the tunnel is made of a reflective material.

15. (Withdrawn) An apparatus according to claim 6, wherein the tunnel comprises a first region in which the lamps deliver diffuse radiation with an intensity which is reduced towards the face, wherein the first region consists of a front surface of the tunnel at the face, a central region of the tunnel, front and central portions of side walls and a bottom of the tunnel.

16. (Currently Amended) An apparatus for separating discrete bodies from a source body having a face and a longitudinal direction, the apparatus comprising:

- a separating device;
- an advance device for advancing the source body towards the separating device;
- an optical detection device for determining the face area of the source body;
- a tunnel in which the source body is guided, the tunnel having an end adjacent the separating device;

- a plurality of lamps for illuminating the surrounding environment of the face; the lamps being mounted in the tunnel for illuminating in a planar fashion along the longitudinal direction of the source body such that the face and the surrounding of the face have an optical contrast,

- wherein the optical detection device determines the area of the face by means of said optical contrast between the surrounding environment and the face, and the source body is advanced as a function of the detected face area as determined by the optical detection device;

- wherein the tunnel comprises a first region front edge in which the lamps deliver diffuse radiation with an intensity which is reduced towards the face, wherein the first region consists of a front surface of the tunnel at the face, a central region of the tunnel, front and central portions of side walls and a bottom of the tunnel; and

wherein the tunnel comprises a ~~second region~~ cover adjacent to the front edge in which the lamps deliver radiation directed rearwards away from the face, ~~wherein the second region is composed of the front portion of the tunnel adjacent to the face.~~

17. (Currently Amended) An apparatus for separating discrete bodies from a source body having a face and a longitudinal direction, the apparatus comprising:

a separating device;
an advance device for advancing the source body towards the separating device;
an optical detection device for determining the face area of the source body;
a tunnel in which the source body is guided, the tunnel having an end adjacent the separating device;

a plurality of lamps for illuminating the surrounding environment of the face; the lamps being mounted in the tunnel for illuminating in a planar fashion along the longitudinal direction of the source body such that the face and the surrounding of the face have an optical contrast,

wherein the optical detection device determines the area of the face by means of said optical contrast between the surrounding environment and the face, and the source body is advanced as a function of the detected face area as determined by the optical detection device;

wherein the tunnel comprises a ~~first region~~ front edge in which the lamps deliver diffuse radiation with an intensity which is reduced towards the face, ~~wherein the first region consists of a front surface of the tunnel at the face, a central region of the tunnel, front and central portions of side walls and a bottom of the tunnel;~~ and

wherein the tunnel comprises a third region in which the lamps deliver radiation directed obliquely forwards towards the end of the tunnel adjacent the separating device, wherein the third region is composed of a ~~rear region~~ cover adjacent to the rear end of the tunnel.

18. (Previously Presented) An apparatus according to claim 15, wherein the tunnel comprises a fourth region in which the lamps deliver radiation directed straight

onto the advanced device provided at the bottom of the tunnel, wherein the fourth region is composed of the central region of the exposed side wall.

19. (Currently Amended) An apparatus for separating discrete bodies from a source body having a face and a longitudinal direction, the apparatus comprising:

a separating device;

an advance device for advancing the source body towards the separating device;

an optical detection device for determining the face area of the source body;

a tunnel in which the source body is guided, the tunnel having an end adjacent the separating device;

a plurality of lamps for illuminating the surrounding environment of the face, the lamps being mounted in the tunnel for illuminating in a planar fashion along the longitudinal direction of the source body such that the face and the surrounding of the face have an optical contrast,

wherein the optical detection device determines the area of the face by means of said optical contrast between the surrounding environment and the face, and the source body is advanced as a function of the detected face area as determined by the optical detection device;

wherein the tunnel comprises a ~~first region front edge~~ in which the lamps deliver diffuse radiation with an intensity which is reduced towards the face, ~~wherein the first region consists of a front surface of the tunnel at the face, a central region of the tunnel, front and central portions of side walls and a bottom of the tunnel~~; and

wherein the side wall of a lighting frame provided for contacting the source body is slidable.

20 – 31. (Cancelled)

32. (New) An apparatus to separate discrete bodies from a source body comprising:

an advance device disposed to advance the source body in a direction of travel towards a cutting plane;

a cutting device disposed to cut slices from the source body, said cutting device defining said cutting plane such that said cutting plane is substantially perpendicular to said direction of travel;

a first light source, said first light source being oriented to illuminate said source body from an angular range that includes an angle substantially perpendicular to said direction of travel;

a second light source, said second light source being oriented away from said cutting plane and at least partially opposite said direction of travel;

a third light source, said third light source being oriented toward said cutting plane such that an edge of the source body is illuminated;

a sensor, said sensor being configured to sense a surface area of a cutting face of the source body from a contrast lighting of said cutting face with a surrounding illumination from said first light source, said second light source and said third light source; and

a processor, said processor being configured to adjust said cutting device in response to a surface area input from said sensor.

33. (New) The apparatus of claim 32 wherein said second light source is mounted between said cutting plane and said first light source relative to said direction of travel.

34. (New) The apparatus of claim 32 wherein said first light source is mounted between said second light source and said third light source relative to said direction of travel.

35. (New) The apparatus of claim 32 wherein said first light source, said second light source and said third light source are mounted on opposite sides of said cutting plane from said sensor relative to said direction of travel.

36. (New) The apparatus of claim 32 further comprising a fourth light source, said fourth light source being oriented to illuminate said source body from an angular range that includes an angle substantially perpendicular to said direction of travel and said orientation of said fourth light source being also substantially perpendicular to said first light source.

37. (New) The apparatus of claim 32 further comprising a tunnel, said tunnel being oriented with a long axis substantially parallel to said direction of travel and said tunnel providing a mount for said light sources.

38. (New) The apparatus of claim 32 wherein a light from any of said light sources is pulsed.

39. (New) The apparatus of claim 32 wherein a light from any of said light sources may be selectively varied in brightness.

40. (New) The apparatus of claim 32 wherein said second light source is oriented to reduce shadows on said cutting plane.

41. (New) The apparatus of claim 32 wherein a brightness of said second light source is lower than a brightness of at least one of said first light source or said third light source.

42. (New) The apparatus of claim 132 further comprising a memory, said memory being in operative communication with at least one of said light sources, and said memory being configured to store at least one of a brightness or a pulse length for at least one of said light sources.

43. (New) The apparatus of claim 32 further comprising a side wall that is slideable relative to said cutting plane.